2012 - JCR Evaluation Form

SPECIES: Moose
HERD: MO105 - SUBLETTE
HUNT AREAS: 3-5, 10, 20-25

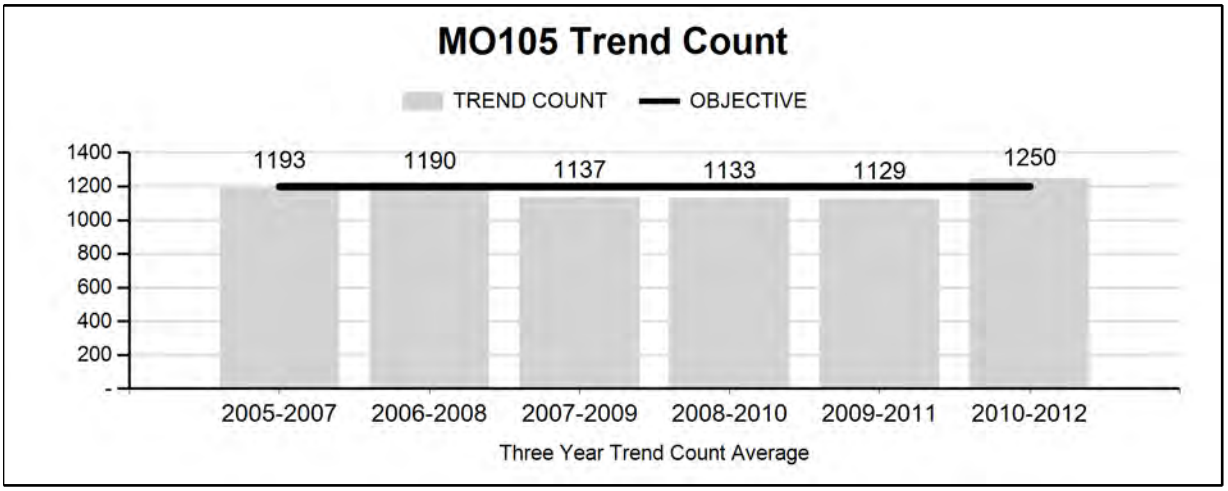
PERIOD: 6/1/2012 - 5/31/2013
PREPARED BY: DEAN CLAUSE

	2007 - 2011 Average	2012	2013 Proposed
Trend Count:	1,172	1,300	1,300
Harvest:	255	215	205
Hunters:	288	245	240
Hunter Success:	89%	88%	85%
Active Licenses:	288	88%	240
Active License Percentage:	89%	88%	85%
Recreation Days:	2,040	1,621	1,550
Days Per Animal:	8	7.5	7.6
Males per 100 Females:	62	65	
Juveniles per 100 Females	41	39	

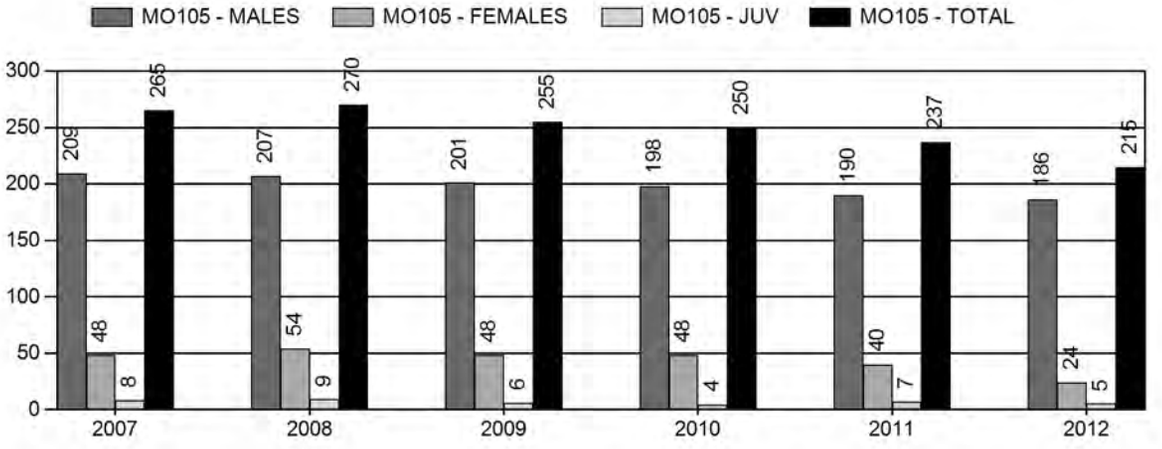
Trend Based Objective (± 20%)	1,200 (960 - 1440)
Management Strategy:	Special
Percent population is above (+) or (-) objective:	8%
Number of years population has been + or - objective in recent trend:	0

Proposed harvest rates (percent of pre-season estimate for each sex/age group):

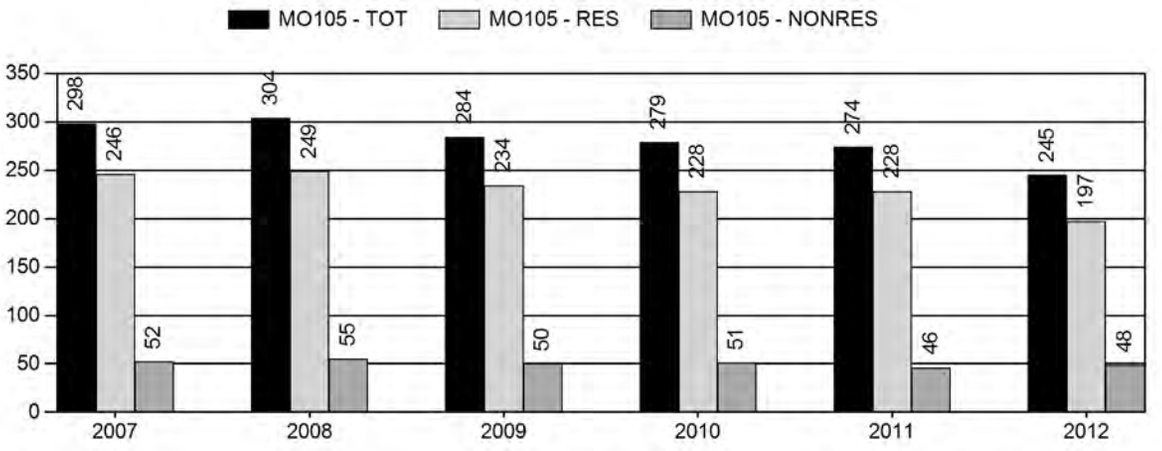
	JCR Year	Proposed
Females ≥ 1 year old:	0%	0%
Males ≥ 1 year old:	0%	0%
Juveniles (< 1 year old):	0%	0%



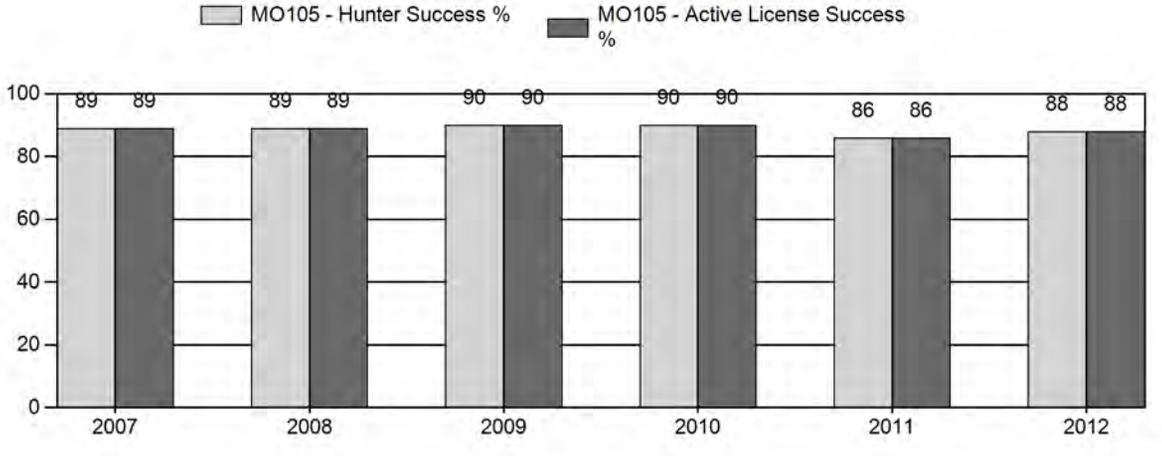
Harvest



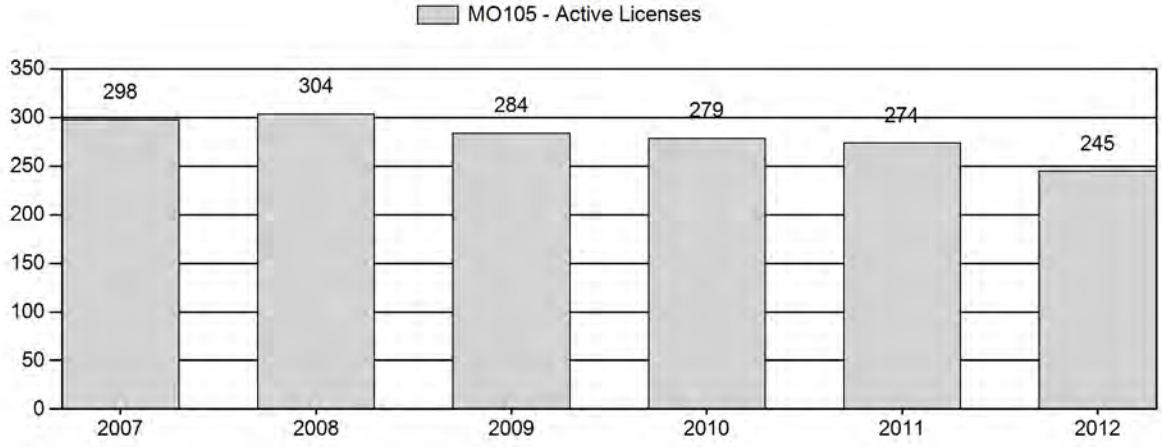
Number of Hunters



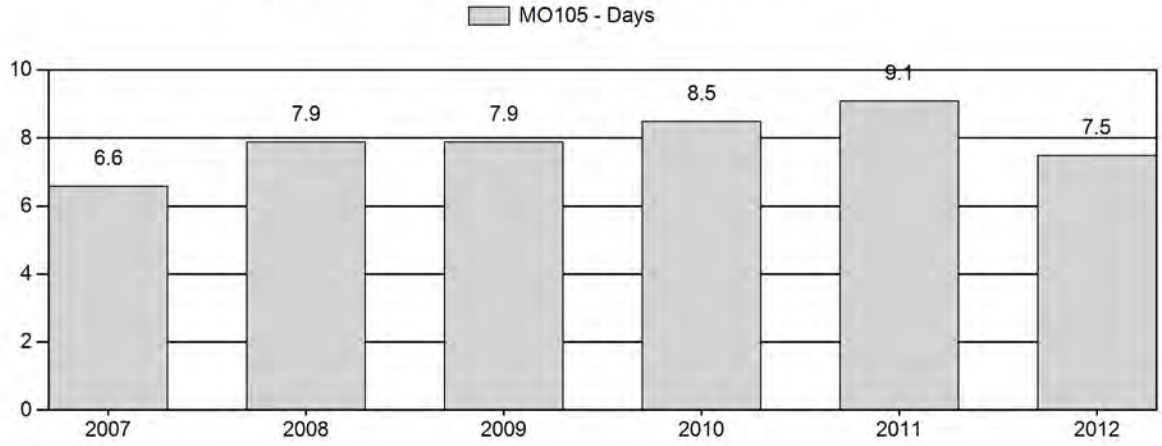
Harvest Success



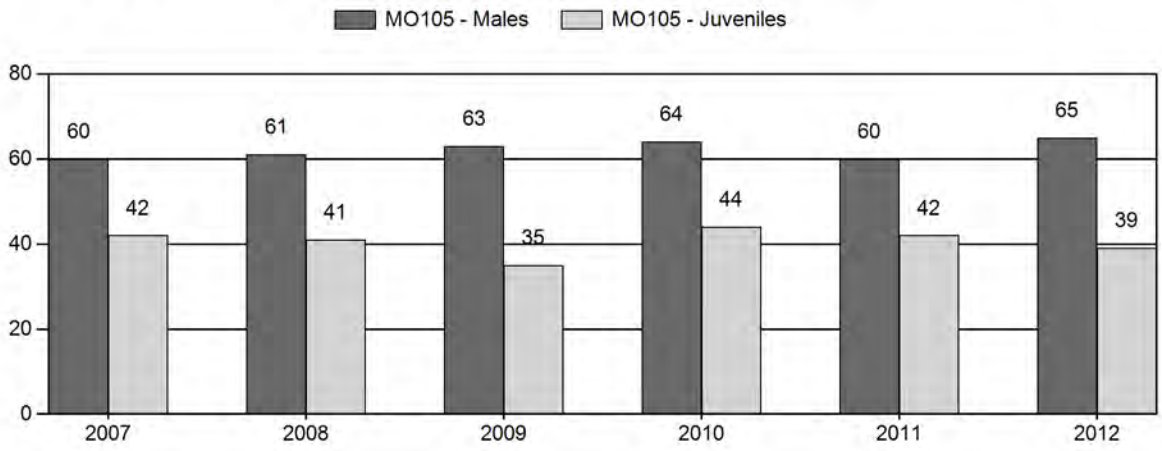
Active Licenses



Days per Animal Harvested



Postseason Animals per 100 Females



2007 - 2012 Postseason Classification Summary

for Moose Herd MO105 - SUBLETTE

		MALES				FEMALES		JUVENILES				Males to 100 Females				Young to		
Year	Post Pop	Ylg	Adult	Total	%	Total	%	Total	%	Tot Cls	Cls Obj	Ylng	Adult	Total	Conf Int	100 Fem	Conf Int	100 Adult
2007	4,481	0	350	350	30%	582	50%	243	21%	1,175	992	0	60	60	± 0	42	± 0	26
2008	4,768	0	383	383	30%	629	50%	255	20%	1,267	980	0	61	61	± 4	41	± 3	25
2009	4,701	0	295	295	32%	465	50%	163	18%	923	1,041	0	63	63	± 0	35	± 0	21
2010	4,908	0	361	361	31%	563	48%	246	21%	1,170	1,111	0	64	64	± 0	44	± 0	27
2011	5,000	0	377	377	30%	625	49%	262	21%	1,264	1,016	0	60	60	± 4	42	± 3	26
2012	0	0	413	413	32%	632	49%	247	19%	1,292	1,118	0	65	65	± 0	39	± 0	24

2013 Seasons – Sublette Moose Herd Unit (MO105)

Hunt Area	Type	Opens	Closes	Quota	Limitations
3	1	Sept. 20	Oct. 31	10	Limited quota; antlered moose
4	1	Sept. 20	Oct. 31	10	Limited quota; antlered moose
	4	Sept. 20	Oct. 31	5	Limited quota; antlerless moose
5	1	Oct. 1	Oct. 31	30	Limited quota; antlered moose
	4	Oct. 1	Oct. 31	15	Limited quota; antlerless moose
10	1	Sept. 10	Oct. 31	15	Limited quota; antlered moose
20	1	Sept. 10	Oct. 31	20	Limited quota; antlered moose
21	1	Sept. 10	Oct. 31	5	Limited quota; antlered moose
22	1	Oct. 1	Oct. 31	15	Limited quota; antlered moose
23	1	Sept. 15	Oct. 31	25	Limited quota; antlered moose
24	1	Oct. 1	Oct. 31	25	Limited quota; antlered moose
	4	Oct. 1	Oct. 31	5	Limited quota; antlerless moose
25	1	Oct. 1	Oct. 31	45	Limited quota; antlered moose
	4	Oct. 1	Oct. 31	15	Limited quota; antlerless moose
Archery Seasons					
3,4		Sept. 1	Sept. 19		Refer to Section 3
5,22,24,25		Sept. 1	Sept. 30		Refer to Section 3
10,20,21		Sept. 1	Sept. 9		Refer to Section 3
23		Sept. 1	Sept. 14		Refer to Section 3

Hunt Area	License Type	Quota Change from 2012
23	4	-5
Herd Unit Totals	**4**	**-5**

Management Evaluation
Current Mid-Winter Trend Count Management Objective: 1,200
Management Strategy: Special
2012 Trend Count:1300
Most Recent 3-year Running Average Trend Count:1250

The Sublette Moose Herd Unit encompasses approximately 3,306 square miles of occupied moose habitat that lies within portions of Lincoln, Sublette, and Teton Counties. The Wyoming Range and Salt River Range Mountains, along with a portion of the Wind River and Gros Ventre Mountains lie within this herd unit. A total of 10 Hunt Areas (Areas 3, 4, 5, 10, 20, 21, 22, 23, 24, & 25) make up the Sublette Herd Unit. A mid-winter trend objective of 1,200 (±20%) moose is being proposed as a management objective for this herd unit. This herd unit is also under a "special" management strategy to maintain an average harvest age of 4 for bulls as a measure to maintain "trophy" harvest opportunities.

Herd Unit Issues
Undetermined moose deaths have been documented within this herd unit during the past 6 years, typically in the early spring. The significance of these spring mortalities are currently unknown, and it appears other factors besides hunter harvest is slowing population growth. Habitat condition (quality and quantity) may also be impacting this moose herd and recent efforts are investigating habitat use and moose body condition.

Weather
Although winter snow accumulations appear to influences winter trend count data as counts increase at lower elevations on winters with above average snow loads, little is known of other affects of weather on this moose herd. Recent weather trends have been drier and warmer and more specific information can be accessed from the following websites:
http://www.ncdc.noaa.gov/temp-and-precip/time-series/
http://www.ncdc.noaa.gov/oa/climate/research/prelim/drought/pdiimage.html

Habitat
The main plant community associations in this herd unit are willow, sagebrush, aspen, conifer, and alpine communities from lower to higher elevations (6,500 to 12,500 feet). Moose in this herd unit can be found on both private and public land managed by the U.S. Forest Service and Bureau of Land Management (BLM) during summer and fall periods. During the winter months most moose migrate to lower elevation willow bottom or aspen dominated habitats, typically associated with private lands. Roughly 700 square miles of native winter range have been identified in this herd unit, which encompasses all types of land ownership (private, public, and state trust land).

Habitat assessments were conducted in 2009-2011 within portions of this moose herd unit. Specific information about this habitat assessment along with other ongoing habitat project information can be found at the following source: Please see the 2012 Annual Report Strategic Habitat Plan Accomplishments, Jackson and Pinedale Region sections located at either the Jackson or Pinedale Game & Fish Regional Office for detailed summaries of habitat work within the Sublette Herd Unit.

Field Data
Moose numbers increased during 2012 postseason classification surveys compared to 2011. Snow conditions were below normal during the 2012-2013 winter. A high concentrations of moose at lower elevations in Areas 4 and 25 (Table 1) and fewer moose at higher elevation habitats is typical for winter surveys. Trend counts are influenced by winter snow depths, as an even higher proportion of moose concentrate at lower, usually willow bottom, habitats on heavy snow years, and vacate higher elevation forested habitats where moose observability is poor. Budgeted survey time limits the coverage of forested habitats, concentrating survey efforts to lower elevation habitats where moose congregate and observability is good. Trend counts increased the last two winters (below average snowpack), compared to the 2010 count (above average snowpack)and winter with heavy snow accumulation, and suggests population growth for this herd.

Postseason classification surveys for 2012 produced a bull:100 cow ratio of 65:100, higher than the bull ratio of 60:100 documented in 2011. The 2012 calf: 100 cow ratio declined to 39:100, compared to 42:100 in 2011. The 5-year (2007-2011) average bull:cow:calf ratio for this herd unit is 62:100:41.

Table 1. Trend counts by Hunt Area for the Sublette Moose Herd Unit, 2003-2012.

Hunt Area	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
3	29	17	29	24	19	11	56	18	38	21
4	243	193	247	248	244	271	212	261	320	319
5	80	119	93	75	76	106	48	100	44	82
10	6	10	18	52	11	7	13	10	8	4
20	22	29	61	13	39	19	10	16	28	13
21	17	4	4	12	10	22	4	30	23	18
22	30	18	11	6	17	28	30	23	27	49
23	38	51	75	60	50	28	60	46	26	52
24	0	0	0	0	0	0	0	0	0	0
25	742	755	749	606	729	788	503	679	754	742
Total	**1207**	**1196**	**1287**	**1096**	**1195**	**1280**	**936**	**1183**	**1268**	**1300**

Harvest Data
A total harvest of approximately 215 moose (185 bulls and 30 cows/calves) was reported in 2012, lower than the 240 moose (190 bulls and 50 cow/calves) reported in 2012. Harvest has continued to decline slightly during the past 5 years, as managers have continued to make slight reduction in licenses. The total number of licenses issued declined from 630 in 2002 to 245 in 2012, a total decrease of 385 (61%). These reductions in license types equates to declines of 80% (n=185) in antlerless and 50% (n=200) in antlered licenses. Compared to the previous 5-year averages, hunter success remains similar at 88% in 2012, while hunter effort decreased slightly from 8.0 to 7.5 days per animal harvested.

A total of 135 teeth representing approximately 63% of the reported 2012 harvest were aged using cementum annuli analysis. The 2012 tooth age results from the WGFD lab showed an average age of 4.0 (derived from 63% of reported harvest) for bulls and 2.6 (derived from 71% of reported harvest) for cows. Average age of harvest decreased for bulls and significantly

decreased for cows compared to the 2011(Figure 1). The 10 year average (2003-2012) age of harvest for this herd unit is approximately 4.0 years for bulls and 3.9 years for cows (Figure 1).

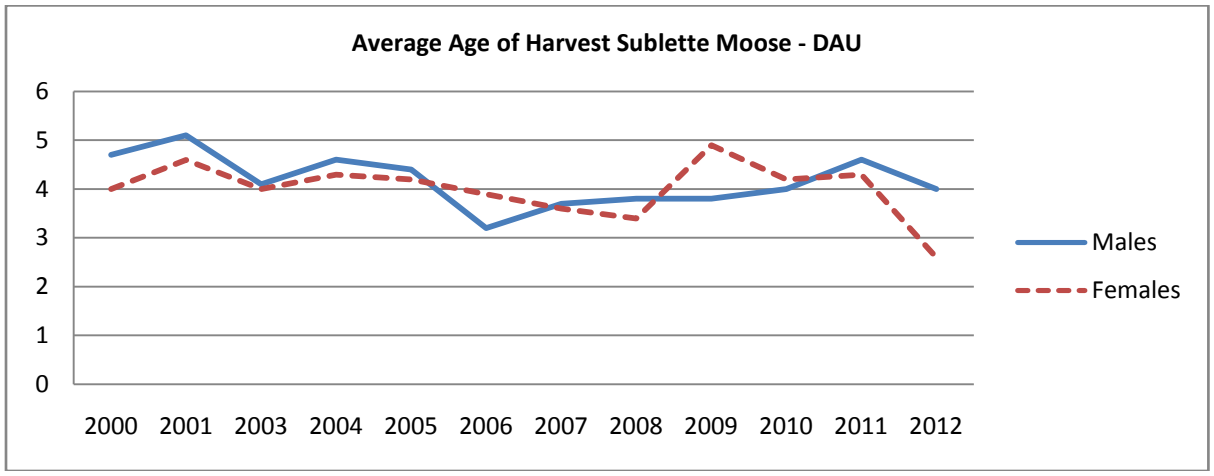


Figure 1. Average age of harvested male and female moose, Sublette Herd Unit, 2000-2012.

Population

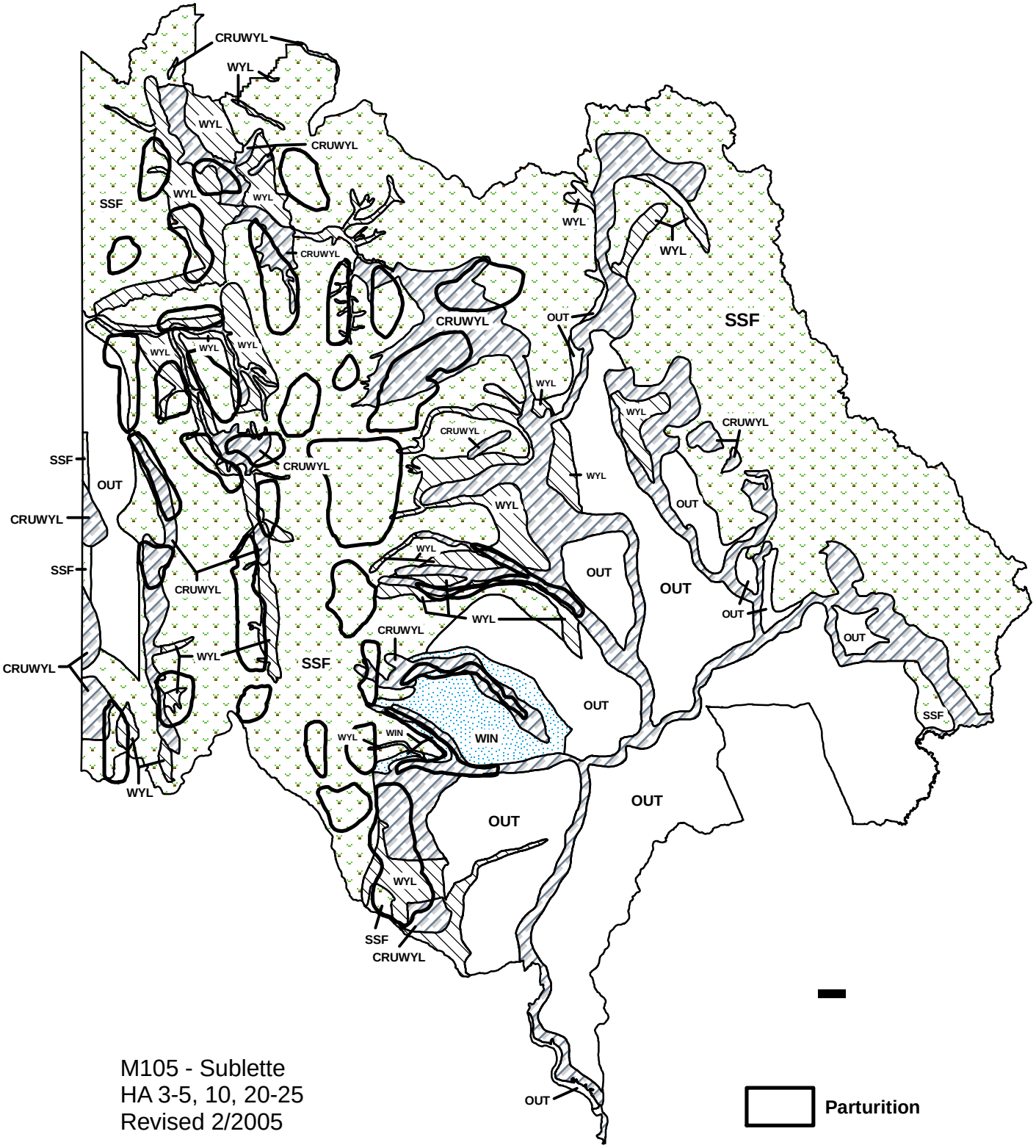
Proposed for 2013, a mid-winter trend count will be used to manage this herd unit instead of past population modeling efforts. The mid-winter trend objective being proposed for this herd is 1,200 moose (± 20%), which reflects what average trend counts have been during the past 10 years. The 2012 mid-winter trend count average was 1300 moose and the 3-year average (2010-2012) trend average was 1250.

Past population modeling efforts for this herd have typically produced estimates higher, usually ~75% higher, than what annual trend counts document Moose managers are proposing going to a mid-winter trend objective, as those trends should reflect population level changes in this herd unit.

Management Summary

Analysis of the current data suggests this postseason moose population was declining in the late 1990's, stabilized in 2004 and 2005, then began slowly increasing through 2012. During 2012, reproduction rates remain good at 39 calves:100 cows, male ratios remained relatively stable at 65 bulls:100cows, trend counts increased, and harvest success remained high at 88%. In addition, average age of harvested males are adequate, maintaining good bull quality throughout the herd unit. Trend data suggest the population is currently stable to slowly increasing.

Only one change, elimination of Type 4 licenses (-5) in Area 23, was made for the 2013 season. A total of 200 Type 1 (antlered) and 40 Type 4 (antlerless) licenses are available for 2013. Anticipated harvest for 2013 is approximately 175 bulls and 30 cows/calves for a total harvest of 205 moose. Given average reproduction, this harvest should result in a 2013 mid-winter trend count near 1300 moose.


CRUWYL
WYL
SSF
OUT
WIN
M105 - Sublette
HA 3-5, 10, 20-25
Revised 2/2005
Parturition